

## CLAIMS

1. A data structure which defines an electronic document, the data structure  
5 comprising first and second substantially separate portions of data; the first  
portion of data defining the content of the document and the second portion  
comprising data relating to a pattern of position identification markings  
such that when the electronic document is printed a pattern reading device,  
such as a pen, is able to determine its position relative to the position  
10 identification markings, the data structure comprising a single data file  
with the first and second data portions being embedded within the data file.
2. A data structure according to claim 1 which is written in such a form  
that the data structure can be converted from one format to other formats  
15 without losing any of the information from the document.
3. A data structure according to any preceding claim in which the  
second portion of data comprises metadata and in which the data structure  
includes one or more controls which control the way in which the second  
20 portion of data is converted between formats to preserve the pattern.
4. A data structure according to any preceding claim in which the data  
in the second portion comprises any one or more of the following: data  
from which an algorithm or the like can generate the pattern; co-ordinates  
25 or other metadata identifying the portion of the position identification  
marking.
5. A data structure according to any preceding claim in which the at  
least one portion providing the position of the position identification  
30 markings within the document and/or data identifying the content of the  
position identification marking in the document is provided in XML

6. A data structure according to any preceding claim in which a schema, generally an XML schema, is provided.

5 7. An application adapted to produce an electronic document, the application comprising:  
content receiving means for receiving the content of the electronic document,  
pattern receiving means for receiving data defining a pattern of positional  
10 markings allocated to at least a portion of the document; and  
data structure generating means for generating a data structure defining the electronic document which data structure comprises first and second substantially separate portions of data, the first portion of data defining the content and the second portion of data relating to the pattern.

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8. A method for generating an electronic document comprising creating an electronic file and storing in that file data and metadata, the data defining at least some content and the metadata relating to a pattern of position identification markings arranged to allow a device, such as a pen,  
20 to determine its position within the position identification markings, the electronic file capable of generating an electronic document.

9. A method according to claim 8 in which a file embedding mechanism is used to embed metadata, generally XML metadata, within the  
25 electronic document.

10. A data carrier containing instructions which when read onto a computer cause that computer to perform the method of claim 8 or claim 9.

11. A data carrier containing instructions which when read onto a computer cause that computer to provide the data structure of any of claims 1 to 6.

5 12. A data carrier containing instructions which when read onto a computer cause that computer to provide the digital document creation application of claim 7.

10 13. A data carrier containing instructions which when read onto a computer cause that computer to perform the method of claim 8 or 9.

14. A source file for a digital document, the digital document comprising content and a pattern of position identification markings arranged to allow a device, such as a pen, to determine its position within  
15 the position identification markings, the source file comprising at least first and second portions of data, the first portion defining the content and the second portion comprising metadata which provides a self-defining description of the pattern.